



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,039	04/20/2004	Brian C. Taggart	042390.P18809	7420
8791	7590	11/03/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN			CHAMBLISS, ALONZO	
12400 WILSHIRE BOULEVARD			ART UNIT	
SEVENTH FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90025-1030			2814	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/829,039

Applicant(s)

TAGGART ET AL

Examiner

Alonzo Chambliss

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) 7 and 15-18 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 and 8-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 20 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant cancelled claims 7 and 15-18. Therefore, claims 1-6 and 8-14 are pending in the instant application.

***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 16,270, 272, and 226. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because it is not clear what element in Fig. 1 reference numeral 20 is representing. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

Art Unit: 2814

amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6 and 8-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Terui (US 6,534,879).

With respect to Claim 1, Terui teaches at least a first die 60 having an integrated circuit formed therein and at least one redistribution conductor 385 or 387, 390, 185 or

187, including a pair of contacts 385 or 387 and 185 or 187 (i.e. electrodes or pads) on the die 60. At least one pair of redistribution wire bonding wires 390, each redistribution wire bonding wire 390 having a respective die portion, the die portions of the respective wire bonding wires 390 being attached to the respective contacts 385 or 387 and 185 or 187 of the redistribution conductor (see Figs. 7B, 8, and 9).

With respect to Claim 2, Terui teaches a plurality of redistribution conductors 185 or 187 and 390, each including a respective pair of contacts 185 or 187 on the die; and a plurality of pairs of redistribution wire bonding wires 390, each redistribution wire bonding wire having a respective die portion, the die portions of the respective wire bonding wires being attached to the respective contacts of the redistribution conductors so as to connect a respective one of the pairs of redistribution wire bonding wires through a respective redistribution conductor to one another (see Figs. 7B, 8, and 9).

With respect to Claim 3, Terui teaches wherein the redistribution conductor includes a wire bonding wire 390 between the contacts (see Figs. 7B, 8, and 9).

With respect to Claims 4 and 6, Terui teaches at least a first component 10 (i.e. substrate) other than the die. At least a first terminal on the first component a first of the redistribution wires of the pair having a component portion attached to the terminal, wherein the terminals is outside an area of the die (see Figs. 7B, 8, and 9).

With respect to Claim 5, Terui teaches at least a second terminal on the first component, the other redistribution wire of the pair having a component portion attached to the terminal (see Figs. 7B, 8, and 9).

With respect to Claim 8, Terui teaches at least a third contact on the die, a second of the redistribution wire bonding wires of the pair having apportion attached to the third contact (see Figs. 7B, 8, and 9).

With respect to Claim 9, Terui teaches a substrate 10, a microelectronic die 60 having an integrated circuit formed therein and mounted to the substrate 10. A pair of redistribution terminals 81 or 83 on the substrate 10. A redistribution conductor 385 or 387, 390, 185 or 187 interconnecting the redistribution terminals 81 or 83, the redistribution conductor 385 or 387, 390, 185 or 187 including a redistribution contact 387 on the die 60 and a wire bonding wire having first and second portions attached to one of the redistribution terminals 81 or 83 and to the redistribution contact 387, respectively (see Figs. 7B, 8, and 9).

With respect to claim 10, Terui teaches a plurality of pairs of redistribution terminals on the substrate and a plurality of redistribution conductors, wherein each interconnecting the redistribution terminals of a respective pair. Each redistribution conductor including a redistribution contact on the die and a wire bonding wire having first and second portions attached to one of the redistribution terminals and to one of the redistribution contacts, respectively (see Figs. 7B, 8, and 9).

With respect to Claim 11, Terui teaches conductor includes a pair of redistribution contacts on the die and a pair of redistribution wire bonding wires, each redistribution wire bonding wire having a respective first portion attached to a respective one of the redistribution terminals of the pair and a respective redistribution contact of the pair (see Figs. 7B, 8, and 9).

With respect to Claim 12, Terui teaches a substrate 10, a microelectronic die 60, having an integrated circuit formed therein and mounted to the substrate 10. A plurality of functional terminals 81 or 83 are on the substrate 10. A plurality of functional contacts 181 or 183 on the die 60, each being connected to the integrated circuit. A plurality of functional wire bonding wires 390, each having a first portion attached to a respective functional terminal 81 or 83 and a second portion attached to a respective functional contact 181 or 183. A pair of redistribution terminals 81 or 83 on the substrate 10 and a redistribution conductor 185 or 187, interconnecting the redistribution terminals 81 or 83, the redistribution conductor 185 or 187 and 90 including a redistribution contact 185 or 187 on the die 60 and a wire bonding wire 90 having first and second portions attached to one of the redistribution terminals 81 or 83 and to the redistribution contact 185, 187, respectively (see Figs. 7B, 8, and 9).

With respect to Claim 13, Terui teaches wherein the redistribution conductor is not connected to the integrated circuit between the redistribution contacts (see Figs. 7B, 8, and 9).

With respect to Claim 14, Terui teaches wherein the redistribution conductor includes a pair of redistribution contacts on the die and a pair of redistribution wire bonding wires, each redistribution wire bonding wire having a respective first portion attached to a respective one of the redistribution terminals of the pair and a respective redistribution contact of the pair (see Figs. 7B, 8, and 9).

The prior art made of record and not relied upon is cited primarily to show the product of the instant invention.

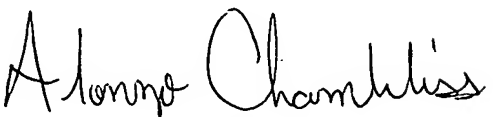
### Conclusion

6. Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (571) 272-1927.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR system see <http://pair-dkect.uspto.gov>. Should you have questions on access to the Private PMR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC\\_Support@uspto.gov](mailto:EBC_Support@uspto.gov).

AC/October 31, 2005

  
Alonzo Chambliss  
Primary Patent Examiner  
Art Unit 2814